



# Fact Sheet

**NPDES Permit Number: AK-005289-2**

**Date: April 24, 2003**

**Contact: Cindi Godsey**  
**Alaska Operations Office/Anchorage**  
**(907) 271-6561 or (800) 781-0983 (in Alaska only)**  
**godsey.cindi@epa.gov**

## **The U.S. Environmental Protection Agency (EPA) Plans To Issue A Wastewater Discharge Permit To:**

Arctic Whitney, Inc.  
P.O. Box 782  
Nome, Alaska 99762

This will also serve as a notice that the  
STATE of ALASKA proposes to CERTIFY,  
and that a  
DETERMINATION OF CONSISTENCY WITH THE  
ALASKA COASTAL MANAGEMENT PROGRAM  
will be made.

### **EPA Proposes NPDES Permit Issuance.**

EPA proposes to issue a *National Pollutant Discharge Elimination System* (NPDES) Permit to Arctic Whitney for a gold dredging operation in Nome, Alaska. The draft permit sets conditions on the discharge - or release - of pollutants from the operation into Norton Sound.

This Fact Sheet includes:

- information on public comment, public hearing, and appeal procedures
- S a description of the facility, its history and current discharge and treatment system
- S a description of proposed effluent limitations, monitoring requirements, and other conditions
- a map (Appendix A) and description of the discharges

### **The State of Alaska proposes certification.**

The Alaska Department of Environmental Conservation (ADEC) proposes to certify the NPDES permit for this operation under section 401 of the Clean Water Act. A proposed certification is included as Appendix B of this fact sheet.

### **Consistency Determination: Alaska Coastal Management Program (ACMP).**

The State of Alaska Division of Governmental Coordination (DGC) initially found this project consistent with the ACMP on June 9, 1997. DGC has determined that no additional review is required to reissue this permit. Persons wishing to discuss this determination may contact Cynthia Zuelow-Osborne at (907) 269-7478.

### **EPA invites comments on the proposed permit.**

EPA will consider all substantive comments before issuing a final permit. Those wishing to comment on the proposed permit may do so in writing by the expiration date of the Public Notice. After the Public Notice expires, and all comments have been considered, EPA's regional Office of Water Director will make a final decision regarding permit issuance.

Persons wishing to comment on the State Certification should submit written comments by the public notice expiration date to the Alaska Department of Environmental Conservation, 610 University Avenue, Fairbanks, Alaska 99709.

If no substantive comments are received, the tentative conditions in the proposed permit will become final, and the permit will become effective upon issuance. If significant comments are received, the EPA will address the comments and reissue the permit along with a response to comments. The permit will become effective 30 days after the issuance date, unless the permit is appealed to the Environmental Appeals Board (EAB) within 30 days.

### **Documents are available for review.**

The proposed NPDES permit and related documents can be reviewed at EPA's Regional Office in Seattle between 8:30 a.m. and 4:00 p.m., Monday through Friday. This material is also available for inspection and copying at the following places in Alaska:

USEPA Alaska Operations Office  
Federal Building, Room 537  
222 West 7th Avenue  
Anchorage, Alaska 99513-7588  
Telephone: (800) 781-0983 (Within Alaska)

USEPA Alaska Operations Office  
709 W. 9<sup>th</sup> Street, Room 223  
PO Box 20370  
Juneau, Alaska 99802  
Telephone: (907) 586-7619

ADEC Watershed Development Program  
Air and Water Quality Division  
610 University Avenue  
Fairbanks, AK 99709 Telephone: (907) 451-2142

## TECHNICAL INFORMATION

### I. APPLICANT INFORMATION

Arctic Whitney, Inc. has applied for an NPDES permit for an amphibious suction dredge operation. The re-application package was received by EPA on October 30, 2002. The NPDES Permit Number is AK-005289-2.

The facility will operate off-shore of Nome (Figure 1). The dredge is mounted on wheels with 10 foot tires, and is capable of operating in water depths of 5 to 10 feet. A bucketwheel cutter will pass the sand and gravel to a trommel which will discharge +½ inch rock and pass -½ inch material to the 10 inch suction hose (possibly restricted down to an 8 inch nozzle). A 10 inch solids pump will lift the slurry through a diffuser to a shaker screen which will feed three size categories to individual sluice boxes. The tailings from these sluices will be pumped aft through a 12 inch hose and discharged with the oversize from the trommel. During full production, the dredge will be advanced about 15 feet per hour.

The dredge will be designed to mine and process as much as 60 cubic yards per hour. Mining will be conducted with care to minimize excavation of the glacial clay which is detrimental to gold recovery and exacerbates the efforts to minimize turbidity. The discharge of all oversize and tailing immediately aft of the excavator assures that the operation will not mound gravel in excess of expansion. Storm activity, surf activity and winter ice movement will totally obliterate small irregularities which might occur.

### II. RECEIVING WATER

The receiving water is the marine water of Norton Sound which is classified in 18 AAC 70 as Classes (2)(A), (B), (C), and (D) for use in aquaculture, seafood processing, and industrial water supply; contact and secondary recreation; growth and propagation of fish, shellfish, other aquatic life, and wildlife; and harvesting for consumption of raw mollusks or other raw aquatic life.

### III. STATUTORY BASIS FOR PERMIT CONDITIONS

#### A. **Technology-based Limitations**

Pursuant to the Act Section 402(a)(2) [40 CFR 122.44(k)(3)], Best Management Practices (BMPs) are being proposed. These practices are reasonably necessary either to achieve effluent limitations or to carry out the Act's goals of eliminating the discharge of pollutants as much as practicable and to maintain water quality.

#### B. **Water Quality-based Limitations**

Section 301(b)(1) of the Act requires the establishment of limitations in permits necessary to meet water quality standards by July 1, 1977. All discharges to state waters must comply with state and

local coastal management plans as well as with state water quality standards, including the state's antidegradation policy. Discharges to state waters must also comply with limitations imposed by the state as part of its coastal management program consistency determination (see Section 5.b., below), and of its certification of NPDES permits under section 401 of the Act.

The NPDES regulations at 40 CFR 122.44(d)(1) require that permits include water quality-based limits which "Achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality."

### **C. Section 308 of the Clean Water Act**

Under Section 308 of the Act and 40 CFR § 122.44(i), the Director must require a discharger to conduct monitoring to determine compliance with effluent limitations and to assist in the development of effluent limitations. EPA has included monitoring requirements in this permit, as listed below.

## **IV. SPECIFIC PERMIT CONDITIONS**

The determination of appropriate conditions for the discharge was accomplished through consideration of technology-based effluent limitations and inclusion of permit terms necessary to ensure compliance with state water quality standards. Discussions of the specific effluent limitations and monitoring requirements appear below.

### **A. Limitations**

Suction dredges' unique method of intake and displacement present unusual permitting issues. They operate on the surface of the water, only remove material from the bottom of the waterbody, and process and quickly return mined material to the bottom. For these reasons EPA has determined that numeric effluent limitations are not necessary. Instead, the BMPs in Permit Part II. have been developed. These BMPs, which are supplemented by required turbidity monitoring designed to ensure that the BMPs are being implemented properly, are, in this circumstance, sufficient to implement the requirements of the Act. That is, these practices would ensure that the beneficial uses designated by the State are adequately protected and justify the absence of more stringent technology and water quality-based effluent limitations.

### **B. Monitoring and Reporting Requirements**

The permit requires daily visual inspection for turbidity of the area within a 500 foot radius of the amphibious suction dredge during operation. This also includes any turbidity that may result from the operation of the wheeled vehicle in Norton Sound. If a visible difference in turbidity is observed beyond 500 feet, the permittee would be required to modify its operations to meet the permit limitation. If the operation could not be modified to meet the limit, the operation would not be authorized.

In most cases, water quality recovers rapidly. The daily inspection during operation, combined with

the BMPs in Permit Part II. should assure that the water quality standards are met.

The reporting requirement is based on 40 CFR § 122.48 which is specified in the permit as a submission of annual report (AR). 40 CFR § 122.44(i)(2) allows flexibility in determining the frequency of reporting.

## **V. OTHER LEGAL REQUIREMENTS**

### **A. Oil Spill Requirements**

Section 311 of the Act prohibits the discharge of oil and hazardous materials in harmful quantities. Routine discharges specifically controlled by a permit are excluded from the provisions of Section 311. However, this permit does not preclude the institution of legal action or relieve the permittee from any responsibilities, or penalties for other, unauthorized discharges of oil and hazardous materials which are covered by Section 311 of the Act.

### **B. Coastal Zone Management Act**

The activity proposed by the applicant was found consistent with the Alaska Coastal Management Plan (ACMP) on June 9, 1997. Jeffrey C. Davis, State of Alaska Division of Governmental Coordination (DGC), stated that since the project has already been through a review and found consistent, it need not go through another (personal communication, October 14, 1997). In an e-mail from Cynthia Zuelow-Osborne, DGC, stated that based on a review of the project's 2003 Annual Placer Mining Application, no additional ACMP review would be required.

### **C. State Water Quality Standards and State Certification**

Whereas state waters are involved in this draft permit, the provisions of Section 401 of the Act will apply. Furthermore, in accordance with 40 CFR § 124.01(c)(1), public notice of the draft permit has been provided to the State of Alaska and Alaska state agencies having jurisdiction over fish, shellfish, and wildlife resources, and over coastal zone management plans.

### **D. Marine Protection, Research and Sanctuaries Act**

No marine sanctuaries as designated by this Act exist in the vicinity of the permit areas.

### **E. Endangered Species Act (ESA)**

EPA has made a decision that the discharges authorized in this permit are not likely to affect species of concern in the project area. Letters were sent to the U.S. Fish and Wildlife Service (USFWS) and to the National Marine Fisheries Service (NMFS) on February 12, 2003, requesting information to the extent of threatened and endangered species in the project area.

In a letter dated February 19, 2003, USFWS concluded that this project is not likely to adversely impact listed species and that preparation of a Biological Assessment or further consultation under section 7 of ESA regarding this project is not necessary. In a letter dated February 28, 2003,

NMFS stated that there is no expectation of any threatened or endangered species to occur in the vicinity of the project site.

#### **F. Essential Fish Habitat (EFH)**

The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act set forth a number of new mandates for NMFS, regional fishery management councils and other federal agencies to identify and protect important marine and anadromous fish habitat. Federal action agencies that may adversely impact EFH are required to consult with NMFS regarding the potential effects of their action on EFH. NMFS, in its February 28, 2003, letter, has expressed concern about the reproductive associations of the red king crab off-shore of Nome. Since activities under this permit are not likely to occur from February through May because open water is necessary for a successful operation and the wheels of the vehicle are only 10 feet high so the operation depth is limited, EPA has determined that no adverse effect to EFH would result from the issuance of this permit.

EPA will send a copy of the draft permit and fact sheet to NMFS at the beginning of the public comment period to inform them of EPA's determination.

#### **VI. REFERENCES**

Impact of suction dredging on water quality, benthic habitat, and biota in the Fortymile River, Resurrection Creek, and Chatanika River, Alaska. Prepared for EPA by Aaron M. Prussian, Todd V. Royer, and G. Wayne Minshall, Idaho State University. June 1999.

Regional Baseline Geochemistry and Environmental Effects of Gold Placer Mining Operations on the Fortymile River, Eastern Alaska. Department of Interior, U.S. Geological Survey. Open-File Report 99-328. 1999.

Regional Geochemical Results from the Analyses of Rock, Water, Soil, Stream Sediment, and Vegetation Samples--Fortymile River Watershed, East-Central Alaska. Department of Interior, U.S. Geological Survey. Open-File Report 99-33. 1999.

The following references were used in an unpublished research effort entitled "A Review of the Regulations and Literature Regarding the Environmental Impacts of Suction Gold Dredges," April 1993 by Phillip A. North of the Environmental Protection Agency, Region 10, Alaska Operations Office.

Griffith, J.S. and D.A. Andrews. 1981. Effects of a small suction dredge on fishes and aquatic invertebrates in Idaho streams. *North American Journal of Fisheries Management* 1:21-28.

Hassler, T.J., W.L. Somer and G.R. Stern. 1986. Impacts of suction dredge mining on anadromous fish, invertebrates and habitat in Canyon Creek, California. *Calif. Coop. Fish. Res. Unit.*, Humboldt State University, Arcata, California, Coop. Agreement No.14-16-009-1547, Work Order No. 2. 135 pages.

Harvey, B.C. 1986. Effects of suction gold dredging on fish and invertebrates in two California streams.

North American Journal of Fisheries Management 6:401-409.

Huber, C. and D. Blanchet. 1992. Water quality cumulative effects of placer mining on the Chugach National Forest, Kenai Peninsula, 1988-1990. U.S. Forest Service, Chugach National Forest, Alaska Region. 74 pages.

Thomas, V.G. 1985. Experimentally determined impacts of a small suction gold dredge on a Montana stream. North American Journal of Fisheries Management 5:480-488.

## Appendix A Facility Location



**Appendix B**  
**Draft 401 Certification**

**DIVISION OF AIR & WATER QUALITY**  
**WASTEWATER DISCHARGE PROGRAM**

610 University Avenue  
Fairbanks, AK 99709  
PHONE: (907) 451-  
2360

DRAFT March 19, 2003

Dale Whitney  
PO Box 782  
Nome, AK 99762

**Certified Mail #**  
**Return Receipt Requested**

**Re: Certificate of Reasonable Assurance for NPDES Permit AK-005289-2.**

Dear Mr. Whitney:

In accordance with Section 401 of the Federal Clean Water Act and provisions of the Alaska Water Quality Standards, the Department of Environmental Conservation has issued the enclosed DRAFT Certificate of Reasonable Assurance for the NPDES Permit AK-005289-2 for discharge from a 8" amphibious suction dredge operation located in Norton Sound near Nome, AK.

Department of Environmental Conservation regulations provide that any person, who disagrees with any portion of the final decision, may request an informal review of the decision or an adjudicatory hearing in accordance with 18 AAC 15.185 or 18 AAC 15.195 - 18 AAC 15.340, respectively. A request for an informal review must be made within 15 days after receiving the department's decision and may be made by mail, electronic mail or facsimile and include the information contained in 18 AAC 15.185. A request for an adjudicatory hearing must be made within 30 days after receiving this letter and should be mailed to the Commissioner of the Alaska Department of Environmental Conservation, 555 Cordova Street, Anchorage, AK. 99501. Pursuant to 18 AAC.200(c), a copy of the request for an adjudicatory hearing must be served on the department office that issued the decision being challenged, and on the permit applicant. A copy of the request also must be provided to the department office issuing the decision in an electronic format. Failure to submit a hearing request within thirty days of receipt of the final determination letter shall constitute a waiver of that person's right to judicial review of this decision.

Please be advised that, pursuant to 18 AAC 15.120(c), the certification of this NPDES permit constitutes the permit required under AS 46.03.100. 18 AAC 15.120(c) also states, "Any rights or privileges inuring to the benefit of EPA in the NPDES permit, including any right to enter, inspect, sample, and have access to records, also inure to the benefit of the department. Any reports or other information filed with EPA in accordance with the NPDES permit must be contemporaneously filed with the department."

If you have any questions concerning the certification, please contact me at (907) 451-2101.

Sincerely,

William D. McGee  
Technical Engineer

Enclosure: Certificate of Reasonable Assurance

Cc: Cindi Godsey, EPA/Anchorage  
Mac McLean, AF&G/Fairbanks  
Steve Borell, AMA/Anchorage

Jack Kerin, ADNR/Fairbanks  
Robert Robichaud, EPA/Seattle

STATE OF ALASKA  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
CERTIFICATE OF REASONABLE ASSURANCE

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This DRAFT Certificate of Reasonable Assurance, in accordance with Section 401 of the Federal Clean Water Act and the Alaska Water Quality Standards, has been requested by the U.S. Environmental Protection Agency for issuance of DRAFT NPDES permit number AK-005289-2. DRAFT NPDES Permit number AK-005289-2 is issued to Arctic Whitney Inc., for a 8" amphibious suction dredge mining operation on Norton Sound near Nome, AK.

Water Quality Certification is required under Section 401 because the proposed activity will be authorized by a National Pollutant Discharge Elimination System (NPDES) permit and a discharge to waters of the United States will result from the proposed activity.

Public notice of the application for this certification was given as required by 18 AAC 15.140.

Having reviewed the application and comments received in response to the public notice, the Alaska Department of Environmental Conservation certifies that there is reasonable assurance that the proposed activity, as well as any discharge that might result, will comply with applicable provisions of

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Section 401 of the Federal Clean Water Act, and with the Alaska Water Quality Standards, 18 AAC 70 provided the following stipulations are adhered to:

1. As allowed under 18 AAC 70.240, the ADEC certifies a mixing zone for turbidity extending 500 feet radially from the dredge's discharge point. The maximum allowable increase in turbidity at all points measured 500 feet and beyond from the discharge point is 25 nephelometric turbidity units (NTU).
2. A visual increase in turbidity (any additional cloudiness or muddiness) outside of a 500 feet radius of the suction dredge during operations is considered a violation of the permit.
3. If noticeable turbidity does occur outside the 500 feet radius of the work site, operation of the suction dredge must decrease or cease so that a violation as defined above does not exist.

Date

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William D. McGee  
Technical Engineer

